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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,144	04/17/2001	Hiroko Iwasaki	2271/50717-AY	7345

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EXAMINER

MCPHERSON, JOHN A

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/836,144

Applicant(s)

IWASAKI, HIROKO

Examiner

John A. McPherson

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 7-21 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 and 13-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12 and 16-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/15/04 has been entered.

### ***Response to Amendment***

2. This Office Action is responsive to the Amendment filed 10/15/04, entered with the request for continued examination filed 12/2/04.

3. The Amendment filed 10/15/04 successfully overcomes the rejection set forth in paragraph 3 of the Office Action mailed 6/15/04. Accordingly, this rejection is withdrawn.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 12, 16 and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,920,007 (US '007). US '007 discloses an optical recording medium provided with a protective layer of an oxide-nitride mixture, wherein the oxide includes silicon oxide and the nitride includes silicon nitride. The nitride and oxide are mixed in a ratio of 9:1 to 1:9, exemplified by a layer comprising  $\text{Si}_3\text{N}_4$  and  $\text{SiO}_2$  in weight proportions of 6:4. See the abstract; column 2, lines 48-51; column 3, lines 1-9; and Example 1. It is the position of the Examiner that the type and composition of recording layer set forth in the preambles of claims 12 and 16 is a statement of intended use for the claimed protection layer, and therefor does not provide a patentable distinction between the presently claimed protection layer and the protection layer of the applied prior art, which is utilized with a different recording layer. Similarly, the statements "for use with the phase variation type data recording layer in a EFM modulation type recording system" and "for use with a recording mechanism which uses melting and rapid cooling of the phase variation type data recording layer" in claims 18-21 are also viewed as statements of intended use for the claimed protection layer.

5. Claims 12 and 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,902,584 (US '584). US '584 discloses an optical recording medium comprising a recording layer on a substrate and a protective layer, wherein the protective layer comprises  $\text{SiO}_2$ ,  $\text{Si}_3\text{N}_4$  and a divalent metal oxide (such as  $\text{MgO}$  and  $\text{ZnO}$ ), and optionally other members such as  $\text{Al}_2\text{O}_3$  and  $\text{AlN}$ . The molar ratio of the silicon oxide to the silicon nitride ranges from about 50:50 to 90:10. See the abstract;

column 4, lines 30-59; and Tables 2-4. It is the position of the Examiner that the type and composition of recording layer set forth in the preambles of claims 12 and 16 is a statement of intended use for the claimed protection layer, and therefor does not provide a patentable distinction between the presently claimed protection layer and the protection layer of the applied prior art, which is utilized with a different recording layer. Similarly, the statements "for use with the phase variation type data recording layer in a EFM modulation type recording system" and "for use with a recording mechanism which uses melting and rapid cooling of the phase variation type data recording layer" in claims 18-21 are also viewed as statements of intended use for the claimed protection layer.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12, 16 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,156,693 [reference AE of the Information Disclosure Statement filed 4/17/01] (US '693) in view of US 4,920,007 (US '007). US '693 discloses an information recording medium comprising a recording layer which comprises a recording material of the composition  $\text{AgInTeSb}$ , wherein the recording medium further comprises protective layers made from various oxides (exemplified by  $\text{SiO}_2$ ) nitrides

(exemplified by  $\text{Si}_3\text{N}_4$ ), sulfides, carbides, or mixtures thereof. See column 3, lines 3-16 and column 4, line 63 to column 5, line 3. However, US '693 does not disclose utilizing a protective layer comprising silicon dioxide mixed with silicon nitride in a molar ratio of 10-85% silicon nitride.

US '007 discloses an optical recording medium provided with a protective layer of an oxide-nitride mixture, wherein the oxide includes silicon oxide and the nitride includes silicon nitride. The nitride and oxide are mixed in a ratio of 9:1 to 1:9, exemplified by a layer comprising  $\text{Si}_3\text{N}_4$  and  $\text{SiO}_2$  in weight proportions of 6:4. See the abstract; column 2, lines 48-51; column 3, lines 1-9; and Example 1. It would have been obvious to one skilled in the requisite art to utilize a mixture of  $\text{Si}_3\text{N}_4$  and  $\text{SiO}_2$ , as taught by US '007, as the material of the protective layer in the recording medium of US '693 because it is taught that such a protective layer provides for superior durability and adhesion as compared to oxides and nitrides alone.

7. Claims 12 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,156,693 [reference AE of the Information Disclosure Statement filed 4/17/01] (US '693) in view of US 4,902,584 (US '584). US '693 discloses an information recording medium comprising a recording layer which comprises a recording material of the composition  $\text{AgInTeSb}$ , wherein the recording medium further comprises protective layers made from various oxides (exemplified by  $\text{SiO}_2$ ) nitrides (exemplified by  $\text{Si}_3\text{N}_4$ ), sulfides, carbides, or mixtures thereof. See column 3, lines 3-16 and column 4, line 63 to column 5, line 3. However, US '693 does not disclose utilizing a protective layer

comprising silicon dioxide mixed with silicon nitride in a molar ratio of 10-85% silicon nitride.

US '584 discloses an optical recording medium comprising a recording layer on a substrate and a protective layer, wherein the protective layer comprises  $\text{SiO}_2$ ,  $\text{Si}_3\text{N}_4$  and a divalent metal oxide (such as  $\text{MgO}$  and  $\text{ZnO}$ ), and optionally other members such as  $\text{Al}_2\text{O}_3$  and  $\text{AlN}$ . The molar ratio of the silicon oxide to the silicon nitride ranges from about 50:50 to 90:10. See the abstract; column 4, lines 30-59; and Tables 2-4. It would have been obvious to one skilled in the requisite art to utilize a mixture of  $\text{SiO}_2$ ,  $\text{Si}_3\text{N}_4$ , a divalent metal oxide such as  $\text{MgO}$  and  $\text{ZnO}$ , and optionally other members such as  $\text{Al}_2\text{O}_3$  and  $\text{AlN}$ , as taught by US '584, as the material of the protective layer in the recording medium of US '693 because it is taught that such a protective layer provides for improved durability and adhesion as compared to oxides and nitrides.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. McPherson whose telephone number is (571) 272-1386. The examiner can normally be reached on Monday through Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).



John A. McPherson  
Primary Examiner  
Art Unit 1756

JAM  
3/5/05